UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2462	

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03/29/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   In view of the Appeal Brief filed on 1/13/2011, PROSECUTION IS HEREBY

REOPENED. A new rejection set forth below.

To avoid abandonment of the application, appellant must exercise one of the

following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed

by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and

appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth

in 37 CFR 41.20 have been increased since they were previously paid, then appellant

must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by

signing below:

/Seema S. Rao/

Supervisory Patent Examiner, Art Unit 2462.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

3.   Claims 8, 18, 28, and 38 are rejected under 35 U.S.C. 112, second paragraph,

as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

Claim 8 recites the limitation "said super channel" in last line. There is

insufficient antecedent basis for this limitation in the claim. The "said super channel" is

recited in claim 6, but claim 8 depends on claim 1 and 7, not claim 6. Claim 1 and 7 do

not recite super channel.

Claims 18, 28, and 38 have similar problem.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-42 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Richter et al. (U.S. Patent 5630061, hereafter Richter), in view of Kaplan et

al. (Pub No. US 20080225832, hereinafter Kaplan).

For **claims 1**, **11, 21, 31, and 41**, Richter teaches a method, a machine-readable

storage (see flow chart in Fig. 7), a system (see Title and Figs. 1, 2, 4) for providing

enhanced connectivity in a network (see Fig. 4 for connection from LAN to WAN),

comprising:

receiving messages from a physical layer in a layer above a MAC layer (see Fig.

4 for PD in unit 54 to receive messages from hardware layer 52 and MAC layer 50; PDs

54 are the next layer up from MACs 50 in all of the communications, IEEE and ISO,

architectures, see col. 4, lines 40-42. PD stands for Protocol Drives, see col. 4, line 38).

However, Richter fails to specifically teach aggregating messages from a

physical layer of each communication band and each communication channel

associated with each of a plurality of protocols in a single multi-protocol layer of the

multi-band, multi-protocol network; identifying an optimal communication path based on

said received messages in said single layer; and establishing a communication session

using said identified optimal communication path.

Kaplan teaches

aggregating messages from a physical layer of each communication band and

each communication channel (see Fig. 1, the unit 26 aggregates messages from

different types of devices with different bands through different channels; the wireless

interface 20 may be configured for communications by any type of wireless

communications such as infrared, radio frequency, optical, etc., see [0021], last 3 lines.

The "infrared, radio frequency, optical" are multi-band) associated with each of a

plurality of protocols in a single multi-protocol layer of the multi-band, multi-protocol

network (Fig. 1 shows many network adapters 12-20 (including the LAN and WAN

adapters 14, 16 mentioned in Richter). The T1, LAN, WAN, POTS and wireless of the

network adapters 12-20 are different protocols);

identifying an optimal communication path based on said received messages in

said single layer (see routing optimization unit 26 in Fig. 1; multi-protocol routing

optimization … the path chosen for transmission of a data file, see [0025], lines 1-6);

and

establishing a communication session using said identified optimal

communication path (see Fig. 1, and the path chosen for transmission of a data file, see

[0025], lines 1-6).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine Richter with Kaplan to obtain the invention

as specified, for the user to specify his priorities as to the parameters, in making the

routing determination, see [0025], last 4 lines), and to have various wired network

adapters and various wireless adapters to provide access to various commercially-

available networks as desired for best routing.

For **claims 2, 12, 22, 32, and 42**, Richter with Kaplan teaches everything

claimed as applied above including comprising determining based on said aggregated

messages, whether at least one of said communication channels, said communication

bands, and a combination of said communication channels and said communication

bands provides said optimal communication path for said communication session (see

1, 11, 21, 31, 41. Note that the best routing is through channel).

For **claims 3, 13, 23, and 33**, Richter with Kaplan teaches everything claimed as

applied above (see 1, 2, 11, 12, 21, 22, 31, 32). In addition, Richter teaches comprising

selecting at least one of said communication channels and communication bands, and a

combination of said communication channels and said communication bands for

providing said communication session (providing a respective channel to connect the

first computer and the switched network ... The media access control drivers are

coupled to a protocol driver to send messages, see col. 2, lines 4-5 & 16-17. Here the

messages are sessions).

For **claims 4, 14, 24, and 34**, Richter with Kaplan teaches everything claimed as

applied above including comprising locating said single multi-protocol as a sublayer

within a data link layer (see 1, 2, 3, 11, 12, 13, 21, 22, 23, 31, 32, 33).

For **claims 5, 15, 25, and 35**, Richter with Kaplan teaches everything claimed as

applied above including comprising interfacing said single multi-protocol layer above a

MAC layer, said MAC layer interfaced with said physical layer that is located below said

MAC layer (see 1, 2, 3, 11, 12, 13, 21, 22, 23, 31, 32, 33. Fig. 4 shows all).

For **claims 6, 16, 26, and 36**, Richter with Kaplan teaches everything claimed as

applied above (see 1, 2, 3, 4, 11, 12, 13, 14, 21, 22, 23, 24, 31, 32, 33, 34). In addition,

Richter teaches wherein said single multi-protocol layer is a super channel sublayer,

said super channel sublayer being said sublayer of said data link layer (see Fig. 4. The

layer above the hardware-physical layer is link layer including MAC and PD. This layer

is claimed super channel sublayer for best routing).

For **claims 7, 17, 27, and 37**, Richter with Kaplan teaches everything claimed as applied above (see 1, 11, 21, 31, 41). In addition, Richter teaches comprising monitoring at least a portion of said aggregated messages in said single multi-protocol layer by at least one of a network management process, a bandwidth management process, a load balancing process, a session control and a QoS management process (see managers 60, 62, 64 in Fig. 4 for monitoring messages; connection management … band-width allocation, see col. 5, lines 21 & 26-27).

For **claims 8, 18, 28, and 38**, Richter with Kaplan teaches everything claimed as applied above (see 1, 7, 11, 17, 21, 27, 31, 37). In addition, Richter teaches comprising interfacing at least one of said network management process, bandwidth management process, load balancing process, session control process and QoS management process with said super channel (connection establishment and disestablishment, channel or port selection, band-width allocation, etc., see col. 5, lines 25-27, and managers 60, 62, 64 in Fig. 4 for interfacing the managers with the PD layer – super channel as Applicant called).

For **claims 9, 19, 29, and 39**, Richter with Kaplan teaches everything claimed as applied above (see 1, 7, 8, 11, 17, 18, 21, 27, 28, 31, 37, 38). In addition, Richter teaches comprising extracting channel specific data from said single multi-protocol layer by at least one of said network management process, bandwidth management process, load balancing process, session control process and QoS management process (connection establishment and disestablishment, channel or port selection, band-width allocation, etc., see col. 5, lines 25-27, and managers 60, 62, 64 in Fig. 4; Physical Port

Attributes Table (PPAT) contains all of the information necessary for connection

management, see col. 7, lines 20-21. The "all of the information necessary for

connection management" is claimed channel specific data).

For **claims 10, 20, 30, and 40**, Richter with Kaplan teaches everything claimed

as applied above (see 1, 7, 8, 9, 11, 17, 18, 19, 21, 27, 28, 29, 31, 37, 38, 39). In

addition, Richter teaches comprising sharing channel information acquired by each of

said network management process, bandwidth management process, load balancing

process, session control process and QoS management process among one or more of

said network management process, bandwidth management process, load balancing

process, session control process and QoS management process (PCMs 64 register

with the Connection Manager 62, see col. 6, line 17. The "register with" is claimed

sharing channel information).

Response to Arguments

3.   Applicant's arguments filed 9/13/2010 have been fully considered but are

moot in view of the new ground(s) of rejection.

4.   For claim 1, Applicant argues that the combination of Chapman, Beshai

and Regan does not disclose or suggest at least the limitation of "identifying an

optimal communication path from among said communication band and said

communication channel based on said aggregated messages in said single multi-

protocol layer."

Richter with Kaplan teaches identifying an optimal communication path from

among said communication band and said communication channel based on said

aggregated messages in said single multi-protocol layer. See detail above.

    5.   Other independent claims have the same issues as discussed above.

    6.   Rejections of dependent claims remain effective. See details above.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to WANDA Z. RUSSELL whose telephone number is

(571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art
Unit 2462

WZR/Wanda Z Russell/
Examiner, Art Unit 2462